

## 50% Mishap Reduction Opportunity

FOD and Missing Tools FY99-03

The Naval Safety Center database shows 37 aircraft with FOD incidents or missing tools that did not cause dollar damage but could have caused catastrophic damage. Mechs were able to intercede in some cases and were just plain lucky in others. For example, 13 times boxes, panels, rafts, kneeboards, HEEDS, or fire bottles broke free and struck aircrew, jammed flight controls, or became loose FOD. Nine times tools and consumables were found in flight controls or other sensitive areas. Eight times fasteners, studs, Adel-clamps, or covers FODed aircraft or engines. In two incidents, fuel caps were not installed (one was found in a flap track).

Maintainers or aircrew could have caught almost every one of these potential problems. Thorough acceptance, pre-flight and turnaround inspections must be done. In fact, several of these items were found on such inspections. If we are to reach our mishap goal, we must review current practices and remain vigilant for these problems.

### Type-aircraft breakdown:

FA-18	12
E-2	6
H-60	4
E-6	3
P-3	3
T-45	3
C-20	2
EA-6	2
C-130	1
H-46	1

# NEWER, SAFER CORDLESS DRILL AUTHORIZED FOR AIRCRAFT MAINTENANCE

*By Harold Kimball*

For the last few years, the military has been searching for a cordless-driver tool to be used during aircraft maintenance in Class I, Division 2 locations, but the need always was ahead of available technology. Recent technological developments now have made a cordless driver available to the fleet.

The "HAZLOC" is a brushless and sparkless 12-volt driver for removing and replacing aircraft panels. These drivers will save countless maintenance man-hours spent working on overtorqued aircraft panels and fasteners. The drivers are Underwriters Laboratories certified, meet NEC article 513 aircraft-hangar requirements, and have been tested to MilStd 810F, method 511.4 explosive atmosphere. Two models are available in the stock system: model BFH040SAE, NSN 5130-01-508-1221; and model BFH090SAE, NSN 5130-01-508-1222. The BFH040SAE version is seven-to-40-inch pounds, and the BFH090SAE is 30-to-80-inch pounds. A third model is BFH120FSAE and 44-to-106-inch pounds. This model currently is available only through open purchase.

All models are adjustable in one-inch pound increments. The drivers have a built-in, torque-limiting system that prevents fastener overtorque. The built-in limiter shuts off the driver when the preset torque is reached—accuracy is plus or minus 10 percent. The drivers weigh only 3.3 pounds and are nicely balanced. The driver has five key features: a quick change quarter-inch hex chuck, LED indicator for low battery, forward and reverse switch, battery slide switch, and anti-slip dimpled grip. The driver kit includes a driver, two 12-volt, 2.0-amp batteries, one charger, and a steel case. A few restrictions apply: The drivers are not designed to be, nor are they approved for use, as a drill. They also are not a substitute for a torque wrench.

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